

WHAT IS CLAIMED IS:

1. A rubber-steel cord composite comprising a steel cord having, in a planar image of the composite formed by X-rays passing through the composite, a fraction R of the total area occupied by filaments of from 0.45 or more to 0.95 or less in an arbitrarily selected portion of the steel cord having a length of 15 mm in an axial direction of the cord,

wherein the length of 15 mm in an axial direction of the cord means a length of 15 mm in an axial direction of an actual cord and the fraction R of the total area occupied by the filaments is expressed as $R=F/A$, A representing the total area of the cord and F representing the area of the cord occupied by the filaments.

2. A rubber-steel cord composite according to Claim 1, wherein the filaments of the steel cord are present substantially independently of each other in a matrix rubber.

3. A rubber-steel cord composite according to Claim 1, wherein the steel cord has one of a $1 \times n$ structure and a $1+n$ structure, n being in a range of $2 \leq n \leq 7$.

4. A rubber-steel cord composite according to Claim 1, wherein the filament constructing the steel cord has a diameter in a range of from 0.125 to 0.275 mm.

5. A pneumatic tire for passenger cars comprising a rubber-steel cord composite

which comprises a steel cord having, in a planar image of the composite formed by X-rays passing through the composite, a fraction R of the total area occupied by filaments of from 0.45 or more to 0.95 or less in an arbitrarily selected portion of the steel cord having a length of 15 mm in an axial direction of the cord,

wherein the length of 15 mm in an axial direction of the cord means a length of 15 mm in an axial direction of an actual cord and the fraction R of the total area occupied by the filaments is expressed as $R=F/A$, A representing the total area of the cord and F representing the area of the cord occupied by the filaments.

6. A pneumatic tire for passenger cars according to Claim 5, wherein the filaments of the steel cord are present substantially independently of each other in a matrix rubber.

7. A pneumatic tire for passenger cars according to Claim 5, wherein the steel cord has one of a $1 \times n$ structure and a $1+n$ structure, n being in a range of $2 \leq n \leq 7$.

8. A pneumatic tire for passenger cars according to Claim 5, wherein the filament constructing the steel cord has a diameter in a range of from 0.125 to 0.275 mm.

9. A pneumatic tire for passenger cars according to Claim 5, wherein the rubber-steel cord composite is used in a carcass layer of the pneumatic tire.

10. A pneumatic tire for passenger cars according to Claim 5, further comprising a side wall portion reinforced with a rubber reinforcing layer.
11. A pneumatic tire for passenger cars according to Claim 9, wherein the carcass comprises: a turned-up ply reinforced with a cord of an organic fiber having a melting point of 245°C or higher, and
- a down carcass ply comprising a rubber-steel cord composite in which a plurality of steel cords disposed substantially parallel to each other is embedded in a matrix rubber, said down carcass ply being disposed between a side wall rubber and an outer face of the turned-up ply.
12. A pneumatic tire for passenger cars according to Claim 5, comprising
- a carcass ply reinforced with polyester cords and/or polyamide cords; wherein
- the rubber-steel cord composite is disposed in a side wall portion, the composite in which a plurality of steel cords disposed substantially parallel to each other is embedded in a matrix rubber.
13. A pneumatic tire for passenger cars according to Claim 9, wherein the carcass comprises a turned-up ply and a down ply, and the down ply comprises a plurality of steel cords disposed substantially parallel to each other and a matrix rubber, and is disposed between a side wall portion and an outer face of the turned-up ply, and any one of the turned-up ply and the down ply is a separate-type carcass ply which is separated into portions underneath a belt portion.
14. A pneumatic tire for passenger cars according to Claim 13, wherein any one of the turned-up ply and the down ply is separated into portions disposed

under the belt portion with a distance of at least 20% of a width of the belt portion between the portions.